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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,454	10/20/2003	Keiichi Aoki	KOT-0083	4178

7590 06/07/2005
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EXAMINER
LAMB, BRENDA A

ART UNIT	PAPER NUMBER
1734	

DATE MAILED: 06/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/689,454

Applicant(s)

AOKI, KEIICHI

Examiner

Brenda A. Lamb

Art Unit

1734

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,13 and 14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,13 and 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1734

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Japan 02-207865 and Chino et al.

Japan '865 teaches the design of a apparatus for manufacturing a magnetic recording medium comprised of the following elements: a slot coater for coating a layer of a liquid coating composition into a web, the slot coater comprising a lip plane which as shown comes into contact with the liquid coating composition having a center-line surface roughness Ra of the lip plane which is equal to or less than 0.5 um. Japan '865 fails to teach the coating apparatus is comprised of a supplier structured to separately supply different compositions to the slot coater or a lip plane which contacts the photosensitive layer liquid coating composition having a center-line roughness is within

Art Unit: 1734

the scope of claim 1. However, Chino et al teaches an apparatus for manufacturing a multilayer magnetic coated substrate by separately supplying a different coating compositions (composition C₁ and C₂) from a supplier via inlet pipes 10_a and 10_b. Therefore, it would have been obvious to modify the Japan '865 coating apparatus by providing an additional slot upstream of Japan '865 slot 4 and separately supply using separate pipes for the different coating compositions including one including a magnetic composition from the supplier since Chino et al teaches doing so in the manufacture of a magnetic recording medium obvious dependent on the desired magnetic characteristics of the final end product. Alternatively, it would have been obvious to modify the Chino et al apparatus to finish the surface of the doctor edge of the slot coater contacting at least the magnetic layer such that it has a center-line surface roughness within the scope of the claim such as taught by Japan '865 for the taught advantage of reducing coating non-uniformities. The recitation in claim 1 that the apparatus produces a silver salt photothermographic material and the composition, separately supplied by the supplier, is a photosensitive layer coating composition and non-photosensitive protective layer coating composition is intended end use and its has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus is intended to employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ2d 1647 (1987). Note the combination of the Japan '865 and Chino et al is capable of producing a silver

salt photographic thermographic material since it teaches every positively claimed structural element of the apparatus.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 02-207865 in view of Watanabe.

Japan '865 is applied for the reasons noted above. Japan '865 fails to teach lip plane provided upstream in a conveyance direction of the web of a slit from which the non photosensitive protective layer liquid coating composition is discharged and which comes in contact with the photosensitive layer liquid coating composition that it has a center-line surface roughness within the scope of the claim. However, in manufacturing a magnetic recording medium, Watanabe teaches applying multiple layers to the web using pump 8 to deliver one coating composition to respective slit of the slot coater and pump 9 of to deliver different coating composition to another slit of the slot coater. Therefore, it would have been obvious to modify the Japan '865 apparatus by providing an additional slot for applying coating to the web downstream of the Japan '865 slit 4 for applying the magnetic coating since Watanabe teaches applying multiple layers of coating onto the web using multiple slot coater to manufacture a magnetic recording medium for the taught advantage of multiple layer magnetic recording media-good magnetic conversion characteristics. The recitation in claim 13 that the apparatus produces a silver salt photothermographic material and the composition applied by the slit is a non-photosensitive protective layer composition is intended end use and its has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art

Art Unit: 1734

apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ2d 1647 (1987). Note the Japan '865 coating apparatus is modified is capable of producing a silver salt photothermographic material since it teaches every positively claimed structural element of the apparatus.

Claims 2 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ghost et al 5,484,629 in view of Ishizuka 4,976,999.

Ghost et al teaches the design of a coating apparatus for manufacturing a photosensitive photographic support comprised of the following elements: a slide coater for coating a layer of a liquid coating composition onto a web, the slide coater comprising a slide plane 20 which as shown comes into contact with the liquid coating composition as it exits the coating slot 18. Ghost et al teaches reducing the roughness of the slide surface by polishing the coated surfaces of the slide coater as shown in Figure 1 to reduce the number of streaks formed on the substrate. Ghost et al teaches the coated surfaces of the slide coater, after being treated and before use, have an average roughness of the slide plane is 0.05 to 0.1 um (see column 4 lines 44-47). Ghost et al appears to disclose from his examples that all the surfaces of the slide coater are coated and treated so as to exhibit an average roughness of the slide plane is 0.05 to 0.1 um which reads on surfaces of the slide coater including those downstream from each of the slits having a roughness within the scope of the claimed range (at the upper part of the range) such that coating exiting the each of the slits contacts slide plane having roughness within the scope of the claimed range a surface. Ghost et al fails to teach the average surface roughness of the slide plane is a center-

line surface roughness Ra and the center-line surface roughness Ra is within the scope of the claim. Ghost et al also fails to teach a supplier structured to separately supply different composition to the slide coater. However, Ishizuka teaches an apparatus for manufacturing a photosensitive photographic support in which each slot of the slide coater is separately supplied with a different coating composition using separate suppliers, pumps (P1, P2 and P3), for the taught advantage of separately supplying a different composition to each slot of the slide coater in order to provide different properties to the substrate which include reducing coating non-uniformities of the coated substrate. Therefore, it would have been prima facie obvious to reduce the roughness of the slide plane of the Ghost et al slide coater such that it is within the scope of the claim or one having minimal levels of roughness such as a center-line surface roughness Ra or equal to or less than 0.5 um for the taught advantages of reducing the roughness of the slide plane to minimal levels –reduced occurrence of streaks on the coated substrate. Further, it would have been obvious given the modification of the Ghost et al apparatus as discussed above to provide a supplier which separately supplies using separate pumps to supply different coating composition to each slot of the slide coater such as taught by Ishizuka for the taught advantage of providing different coating composition to each slot of the slide coater which include reducing coating non-uniformities of the coated substrate. Further, as discussed above, it would have been obvious that each of the slide surfaces in the Ghost et al apparatus downstream from each of the slits contacts the applied coating layer has a roughness within scope of the claims since Ghost et al appears to disclose from his examples that

Art Unit: 1734

all the surfaces of the slide hopper are coated and treated so as to exhibit an average roughness of the slide plane is 0.05 to 0.1 μm which reads on slide surfaces of the slide coater downstream from each of the slits having a roughness within the scope of the claimed range (at the upper part of the range) such that coating exiting the each of the slits contacts a slide plane having roughness within the scope of the claimed range.

The recitation in claims 2 and 14 that the apparatus produces as silver salt photothermographic material and the composition, separately supplied by the supplier, is a photosensitive layer coating composition and non-photosensitive protective layer coating composition is intended end use and it has been held a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ 2d 1647 (1987). Note the Ghost et al as modified is capable of producing a silver salt photothermographic material since it teaches every positively claimed structural element of the apparatus. Thus claims 2 and 14 are obvious over the above cited references.

Claims 2 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ghost et al 5,484,629 in view of Fukuda et al and Ishizuka 4,976,999.

Ghost et al teaches the design of a coating apparatus comprised of the following elements: a slide coater for coating a layer of a liquid coating composition onto a web, the slide coater comprising a slide plane 20 which as shown comes into contact with the liquid coating composition as it exits the coating slot 18. Ghost et al teaches reducing the roughness of the slide surface by polishing to reduce the number of streaks formed

on the substrate. Ghost et al teaches the average roughness of the slide plane is 0.05 to 0.1 μm (see column 4 lines 44-47). Ghost et al fails to teach the average surface roughness of the slide plane is a center-line surface roughness R_a and the center-line surface roughness R_a is within the scope of the claim. Ghost et al also fails to teach a supplier is structured to separately supply different compositions to the slide coater. However, Ishizuka teaches an apparatus for manufacturing a photosensitive photographic support in which each slot of the slide coater is separately supplied with a different coating composition using separate supply pumps (P1 P2 and P3) for the taught advantage of separately supplying a different composition to each slot which include reducing coating non-uniformities. Therefore, it would have been prima facie obvious to reduce the roughness of the slide plane of the Ghost et al slide coater such that it is within the scope of the claim or one having minimal levels of roughness such as a center-line surface roughness R_a of equal to or less than 0.5 μm for the taught advantages of reducing the roughness of the slide plane to minimal level – reduced occurrence of streaks on the coated substrate and especially since Fukuda et al teaches minimizing roughness of the surfaces of the slide coater in contact with coating to levels within scope of the claim to reduce the occurrence of streaks on the coated substrate. Further, it would have been obvious given the modification of the Ghost et al apparatus as discussed above to provide a supplier which separately supplies using separate pumps to supply different coating composition to each slot of the slide coater such as taught by Ishizuka for the taught advantage of providing different coating composition to each slot which include reducing coating non-uniformities of the coated

Art Unit: 1734

substrate. Further, as discussed above, it would have been obvious that each of the slide surface in the Ghost et al apparatus downstream from each of the slits contacts the applied coating layer has a roughness within scope of the claim since Ghost et al appears to disclose from his examples that all the surfaces of the slide hopper are coated and treated so as to exhibit an average roughness of the slide plane is 0.05 to 0.1 μm which reads on slide surface of the slide coater downstream from each of the slits having a roughness within the scope of the claimed range (at the upper part of the range) such that coating exiting the each of the slits contacts slide plane having roughness within the scope of the claimed range. The recitation in claims 2 and 14 that the apparatus produces a silver salt photothermographic material and the composition separately supplied by the supplier is a photosensitive layer coating composition and non-photosensitive protective layer coating composition and a slit of the slide coater discharges a photosensitive layer liquid coating composition toward the web is intended end use and it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ 2d 1647 (1987). Note the Ghost et al as modified is capable of producing a silver salt photothermographic material since it teaches every positively claimed structural elements of the apparatus. Thus claims 2 and 14 are obvious over the above cited references.

Applicant's arguments filed 3/07/2005 have been fully considered but they are not persuasive.

Applicant's argument that applicant's invention defines over Japan '865 in that it is directed to application of a photosensitive layer coating composition is found to be non-persuasive. The intended end use of the apparatus for applying a photosensitive layer coating composition and non-photosensitive protective coating composition does not structurally further limit the apparatus claim over the prior art since the Japan '865 as modified by Chino et al or Watanabe is capable of applying these coating composition since it teaches every positively claimed structural elements of the apparatus. Applicant's argument that Japan '865 does not disclose a lip plane provided upstream in a conveyance direction of the web of a slit from which the non-photosensitive protective layer liquid coating composition is discharged and which comes in contact with the photosensitive layer liquid coating composition having a center-line roughness within the scope of the claim. However, Watanabe teaches in manufacturing a magnetic recording medium applying multiple layers to the web using pump 8 to deliver one coating composition thru a respective slit of the slot coater and pump 9 to deliver different coating composition to another slit of the slot coater. Therefore, it would have been obvious to modify the Japan '865 apparatus by providing an additional slot for applying coating to the web downstream of the Japan '865 slit 4 for applying the magnetic coating since Watanabe teaches using multiple slot coater to apply multiple layers of coating onto the web to manufacture a magnetic recording medium for the taught advantage of multiple layer magnetic recording media - good magnetic conversion characteristics.

Applicant's argument that slide plane of the Ghost et al slide coater which is arranged downstream from slot discharging a photosensitive layer coating composition has a center-line roughness within the scope of the claim is found to be non-persuasive. It would have been obvious that each of the slide surfaces in the Ghost et al apparatus, including those downstream from each of the slits, which contacts the applied coating layer has a roughness within scope of the claim since Ghost et al appears to disclose from his examples that all the surface of the slide hopper are coated and treated so as to exhibit an average roughness of the slide plane is 0.05 to 0.1 μm and these surfaces includes slide surfaces of the slide coater downstream from each of the slits having a roughness within the scope of the claim.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Art Unit: 1734

Any inquiry concerning this communication should be directed to Brenda A.

Lamb at telephone number (571) 272-1231. The examiner can normally be reached on

Monday and Wednesday thru Friday with alternate Tuesdays off.

B. Lamb/af
May 26, 2005


BRENDA A. LAMB
PRIMARY EXAMINER